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09/853,280	05/11/2001	Paul Howell	01-013	5865

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EXAMINER

SHERALI, ISHRAT I

ART UNIT PAPER NUMBER

2621

DATE MAILED: 07/01/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/853,280

Applicant(s)

PAUL H OWELL

Examiner

Sherali Ishrat

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4 and 17-20 is/are rejected.
- 7) ☐ Claim(s) 5-16 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |  |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)            |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>2</u> . | 6) <input type="checkbox"/> Other: ____  |

## DETAILED ACTION

### Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-4 are rejected under 35 U.S.C. 102(b) as being anticipated by Oles (US 5,946,500).

Regarding claim 1, Oles discloses device with a detachably mountable to camera for creating a digital mask (See Oles, figure 2, col. 4, lines 36-39, "projection device that couples to the camera and generates background image for chroma replacement" Olsen shows projection device 66 detachably mountable [couples] to camera 46 and generating background image for chroma replacement corresponds to creating a digital mask of the background) of scene for discriminating between an object and background (See Oles, col. 4, lines 7-10, background generation for chroma replacement for use with video and digital imaging corresponds to for discriminating between an object and background ),

camera having a lens with an iris and iris having a diameter (See Oles, figure 2, col. 4, lines 40-42, projection device includes camera 46 with lens 56, and figure 3, col. 4, lines 64-66, number of step up or or step down sizing rings couples to the camera

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lens 56 corresponds to camera having a lens with an iris and different size rings inherently have different diameters ) and principal axis (See Oles, figure 2, light 64 from beam splitter to the object 41 corresponds to principal axis) , device comprising:

a beam splitter (See Oles, figure 2, col. 4, lines 59-61, projector 48 coupled to the beam splitter); and

a light source (See Oles, figure 2, col. 4, lines 59-61, projector 48 provides a light 52);

beam splitter is planar (See Oles, figure 2, col. 4, lines 59-61, splitter 60 is shown to be planar) and

deployed so that when camera is mounted in device principle axis passes through beam splitter (See Oles, figure 3, col. 4, lines 58-62 projector 48 coupled to the beam splitter 54, beam-splitter 54 coupled to the camera 46 and in figure 2 Oles shows principle axis 64 from beam splitter 60 to the object 41 which is light 64 from beam splitter projected on object 41 ),

principal axis makes an principle angle with beam splitter (See Oles light 52 from the projector 48 passes through beam splitter and beam splitter projects light 64 on the object 41 and examiner note that light 52 from projector to beam splitter makes angle 90 degrees with the light 64 projected from beam splitter 60 to object 41), and

so that a light beam from light source is incident on beam splitter in a direction making an angle of 90 degrees with priciple axis (See Oles light 52 from the projector 48 passes through beam splitter 54 and beam splitter projects light 64 on the object 41 and examiner note that light 52 from projector to beam splitter makes angle 90

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degrees with the light 64 projected from beam splitter 60 to object 41 thereby light beam from light source is incident on beam splitter in a direction making an angle of 90 degrees with principle axis [light 64]).

Regarding claim 2, Oles discloses principle angle is substantially 45 degrees (See Oles, figure 2, light 64 projected from beam splitter to the object 41 and light 64 projected on floor 82 makes an angle 45 degree).

Regarding claim 3, Oles disclose a light source aperture is deployed between light source and beam splitter (See Oles, figure 2, projector 48 and aperture 50 of light projector is deployed between projector 48 [light source] and beam splitter 60)

so that light beam has light beam diameter when it strikes beam splitter (See Oles figure 2, it is inherent that when light beam 52 strikes the beam 60 it would be with diameter) ,

aperture has aperture diameter (See Oles it is inherent that aperture 50 has a diameter).

Regarding claim 4, Oles discloses providing mean to move light source in any of the three mutually perpendicular directions with respect to beam splitter as part of light source alignment (See Oles, col. 5, lines 18-20, quick connect coupling 58, design that allow the projection device [light source] maintain its orientation when camera is rotated i.e Oles shows quick connect coupling move projection device [light source in any direction with respect to beam splitter 60 which is connected to the camera 46).

## Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 17-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Oles (US 5,946,500) in view of Perry (US 5,971,544).

Regarding claim 17, Oles discloses producing a photograph of an object (See figure 2, col. 2, lines 47-50, image of the subject 41 in figure 2), where photograph contains only the object (See Oles col. 2, lines 47-50, background is removed from the image), comprising the steps of:

providing a retro-reflective sweep behind object (See Oles, figure 2 col. 2, lines 40-42, retro-reflective screen 40 behind the object 41 corresponds to a retro-reflective sweep behind object);

taking a mask exposure (See Oles, figure 2, col. 5, lines 41-50, "projected light 64, creates an exceptionally precise and even illumination of background image as it reflects off of the retroreflective screen and narrow filter is to remove background image [blue screen] from the image", the removal of narrow bandwidth color of background image from the whole image corresponds to taking a mask exposure of the background image so another background can be inserted),

object and sweep are illuminated by a light source during mask exposure (See Oles, figure 2, col. 5, lines 40-45, light 64 is projected on the object 41 and screen 40

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corresponds to object and sweep are illuminated by a light source during mask exposure),

so that a brightness contrast is obtained between object and sweep (See Oles, figure 2, col. 5, lines 45-50, the uniform precision of the background [retro-reflective screen] color results in narrow bandwidth of the color of the background, i.e difference in color of the background and object corresponds to a brightness contrast between object and background [sweep])

using sharp brightness contrast to define a background mask (See Oles, figure 2, col. 5, lines 43-45, narrow band of the color of the background corresponds to sharp brightness contrast to define a background mask),

using background mask to strip background from photograph (See Oles, figure 2, col. 5, lines 43-45, narrow band of the color of the background is removed which corresponds to using background mask to strip background from photograph ).

Oles has not shown supporting the object on transparent surface.

In the same field of endeavor Perry discloses supporting the object on transparent surface (See Perry, col. 2, lines 50-52, Perry shows stage made up of plexiglass to place the object on, plexiglass is obviously transparent surface).

Therefore it would have obvious to one ordinary skill in the art at the time the invention was made to use transparent surface to support the object as shown by Perry in the system of Oles by replacing the floor [figure 2, floor 82] of Oles with plexiglass shown by Perry because such a system provide minimizing the blue-screen [background to be removed] artifacts.

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Regarding claim 18, Oles have shown light source (See Olsen figure 2, light source 48). Oles and Perry have not shown explicitly strobe light. However use of the strobe light is a design choice and such limitation does not carry patentable weight.

Regarding claim 19, Oles discloses light source is constantly energized (See Oles figure 2, light source 48) it is obvious that light source 48 is constantly provided with power [energy] so light source can operate).

Regarding claim 20, Oles discloses light source providing light of different colors (See Oles, figure 2, col. 5, lines 6-9, projector 48 contains sliding light filter i.e sliding light filter would provide light of different colors).

### **Allowable Subject Matter**

5. Claims 5-16 are objected as being dependent on rejected base claim but would allowable if rewritten in independent form including limitation of the claim and any intervening claims.

### **Communication**

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sherali Ishrat whose telephone number is 703-308-9589. The examiner can normally be reached on 8:00 AM - 4:30PM.



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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Leo Boudreau can be reached on 703-305-4706. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

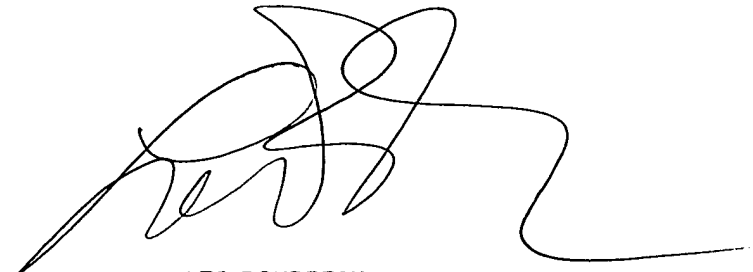


Ishrat Sherali

Patent Examiner

Group Art Unit 2621

June 23, 2004



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